Special Construction for Organic Solvent Filtration

Parker Fulflo® Flo-Pac®+ Cartridges are the filters of choice for many industrial filtration requirements. Flo-Pac+ Pleated Cartridges are manufactured with premium grade, phenolic impregnated cellulose filter media for long service life, high flow rate and low pressure drop. Unique epoxy resin bonding of end caps, pleat side seal and gaskets provides excellent resistance to most organic solvents.

Flo-Pac+ Pleated Cartridges are available in 0.5µm, 1µm, 5µm, 10µm, 20µm and 30µm pore sizes (95% removal; β = 20).

Applications

- **Alcohols**
  (methanol, ethanol, butanol)
- **Aromatic Hydrocarbons**
  (toluene, xylene, benzene)
- **Aliphatic Hydrocarbons**
  (hexane, pentane, naphtha)
- **Ketones**
  (acetone, isophorone, methyl ethyl ketone)
- **Halogenated Hydrocarbons**
  (methylene chloride, chloroform, perchloroethylene)
- **Ethers**
  (THF, dioxane)
- **Glycols**
  (EG, PEG, DEG)
- **Amines**
  (DEA, TEA, DMEA)
- **Esters**
  (ethyl acetate, cellosolve acetate)
- **Halogenated Hydrocarbons**
  (methylene chloride, chloroform, perchloroethylene)
- **Perforated outer metal sleeve protects the media against damage.**
- **ETP (Electro-tin-plated) steel metal components**
  for aqueous and oil-based applications.
- **Gaskets provide positive seals and are available in Viton®, cork and standard vellumoid.**
- **Recommended range is pH 4-10. Please call for specific recommendation.**
Specifications

Filtration Ratings:
- 95% at 0.5µm, 1µm, 5µm, 10µm, 20µm and 30µm pore sizes

Materials of Construction:
- Filter Media: phenolic impregnated cellulose
- Cores: ETP steel
- End Caps: ETP steel
- Sleeve: ETP steel
- Adhesive: epoxy
- End Seals: vellumoid (standard), Viton*, cork

Recommended Operating Conditions:
- Maximum Temperature: 250°F (121°C)
- Change Out \( \Delta P \): 35 psi (2.4 bar)
- Maximum Flow Rate per Single Length Cartridge:
  - 300 Series: 7 gpm
  - 600 Series (3-1/2 in ID): 50 gpm
  - 600 Series (1-1/4 in ID): 35 gpm
  - 700 Series: 50 gpm

Dimensions:
- 300 Series:
  - 2-1/2 in OD x 1 in ID x 9-5/8 in, 19-3/4 in, 29-1/4 in, 29-5/8 in long
- 600 Series:
  - 6-1/4 in OD x 3-1/2 in or 1-1/4 in ID x 14-3/8 in long or 29 in long
- 700 Series:
  - 6-1/4 in OD x 2-1/2 in or 2-1/8 in ID x 18 in or 36 in long

Packaging:
- 300 Series -
  - 310 - 24/carton (12 lb = shipping weight)
  - 320 - 12/carton (12 lb = shipping weight)
  - 330 - 12/carton (18 lb = shipping weight)
- 600 Series -
  - 614 - 6/carton (20 lb = shipping weight)
  - 629 - 6/carton (40 lb = shipping weight)
- 700 Series -
  - 718 - 6/carton (20 lb = shipping weight)
  - 736 - 4/carton (26 lb = shipping weight)

<table>
<thead>
<tr>
<th>FP+ Length Factor</th>
<th>FP+ Flow Factors (psid/gpm @ 1 cks)</th>
<th>Liquid Particle Retention Ratings (µm) at Removal Efficiencies of:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Style</td>
<td>Length Factor</td>
<td>Cartridge</td>
</tr>
<tr>
<td>310</td>
<td>1.0</td>
<td>FPE-0.5</td>
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<tr>
<td>320</td>
<td>2.0</td>
<td>FPE-1</td>
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<tr>
<td>330</td>
<td>3.0</td>
<td>FPE-5</td>
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<tr>
<td>614</td>
<td>3.6</td>
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<td>6.5</td>
<td>FPE-30</td>
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<tr>
<td>736</td>
<td>13.0</td>
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</tr>
</tbody>
</table>

Flow Rate and Pressure Drop Formulas:
\[
\text{Flow Rate (gpm)} = \text{Clean } \Delta P \times \text{Length Factor} \\
\text{Viscosity \times Flow Factor} \\
\text{Clean } \Delta P = \text{Flow Rate \times Viscosity \times Flow Factor} \div \text{Length Factor}
\]

Ordering Information

<table>
<thead>
<tr>
<th>FPE</th>
<th>7</th>
<th>18</th>
<th>5</th>
<th>8</th>
<th>A</th>
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<tbody>
<tr>
<td>Cartridge Code</td>
<td>Outside Diameter</td>
<td>Length</td>
<td>Micron Rating (µm)</td>
<td>Inside Diameter</td>
<td>Seals</td>
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<td>FPE = Flo-Pac+</td>
<td>(code) (in) (series)</td>
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<td>300 Series</td>
<td>None = 1 in</td>
<td>Vellumoid</td>
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<td>3 = 2-1/2 in (300 Series)</td>
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<td>9-5/8</td>
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<td>1</td>
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<tr>
<td>6 = 6-1/4 in (600 Series)</td>
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<td>14-3/8</td>
<td>600</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>7 = 6-1/4 in (700 Series)</td>
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<td>18</td>
<td>700</td>
<td>10</td>
<td>1</td>
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<tr>
<td>36</td>
<td>36</td>
<td>700</td>
<td>30</td>
<td>1</td>
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</tr>
</tbody>
</table>

Notes:
1. Clean \( \Delta P \) is PSI differential at start.
2. Viscosity is centistokes. Use Conversion Tables for other units.
3. Flow Factor is \( \Delta P/\text{GPM} \) at 1 cks for 10 in (or single).
4. Length Factors convert flow or \( \Delta P \) from 10 in (single length) to required cartridge length.

FP+ Flow Factors (psid/gpm @ 1 cks)

- FPE-0.5: 0.0260
- FPE-1: 0.0170
- FPE-5: 0.0020
- FPE-10: 0.0018
- FPE-20: 0.0010
- FPE-30: 0.0009

Liquid Particle Retention Ratings (µm) at Removal Efficiencies of:

- \( \beta=5000 \)
- \( \beta=1000 \)
- \( \beta=100 \)
- \( \beta=20 \)

Fischer-Robertson, Inc
3890 Symmes Road
Hamilton, Ohio 45015
p: 513-860-3445
f: 513-860-4744
sales@fischer-robertson.com
www.fischer-robertson.com

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